



7 / Hallux valgus



medial deviation of the 1st metatarsal with big toe lateral deviation

- Etiology:**
- 1- positive family history in 60%
 - 2- wearing high-heel pointed tight shoe
 - 3- metatarsus primus varus;
 - 4- old age with low muscle tone;
 - 5- RA



Pathology:

- 1- wide forefoot
- 2- big toe tendons shift laterally (nail faces medially)
- 3- bunion (MPJ subluxation, bursa or ST thickening)
- 4-late: OA of the 1st MPJ



CF: woman 50-70 yr or adolescent girl complaining of:

Deformity & pain due to:

- 1- shoe pressure on a bunion
- 2- pain under met. heads
- 3- lesser toes crowding
- 4- OA of 1st MPJ

O/E: the hallux is in valgus & rotated; wide forefoot swollen & inflamed bunion; hammer toe



X-ray: standing AP
valgus angle of the hallux must not exceed 15°

Inter metatarsal angle bet. the 1st & 2nd met <10°

1st MPJ: congruent, deviated, subluxed → osteoarthritic



hallux valgus support



athletic shoe



R → conservative (flat-heel shoe with wide toe-box) for 1-asymptomatic adolescent with congruent joint, 2-elderly

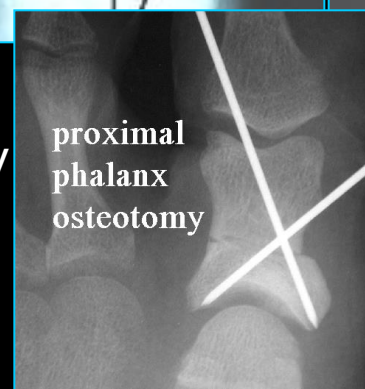
Operative: either bony correction &/or ST reconstruction
high IMA → 1st met basal osteotomy

high HVA → 1st met distal osteotomy ± PP osteotomy

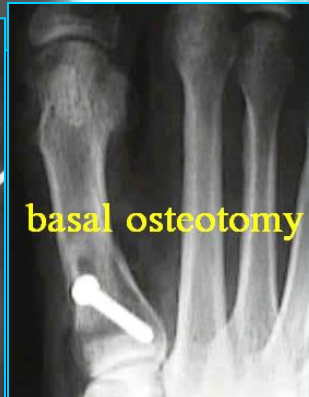
Bunion → bunionectomy

Soft tissue: medial capsule reefing, lateral release, release or transfer of adductor hallucis & tightening of the 1st web space

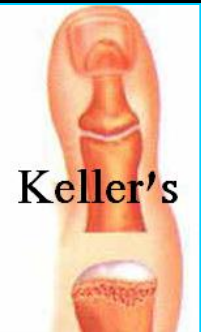
MPJ OA → joint fusion or excision of prox 1/3 of PP



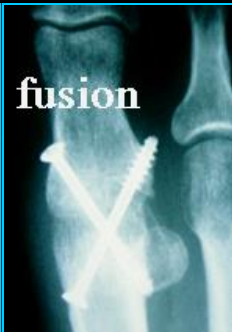
proximal phalanx osteotomy



basal osteotomy



Keller's



fusion



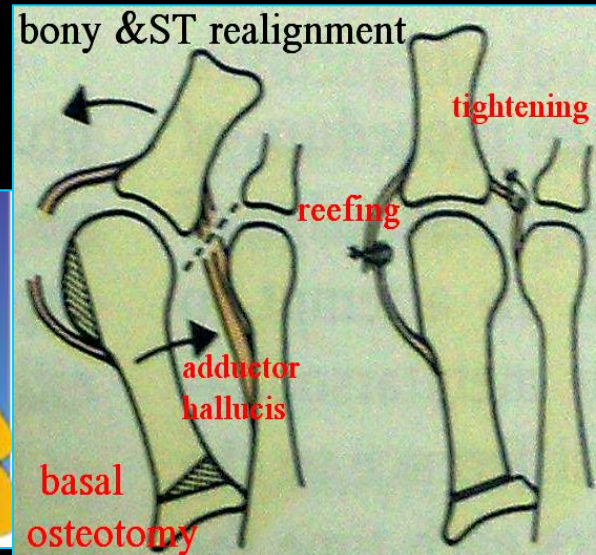
chevron ost.



scarf osteotomy
Z-cut

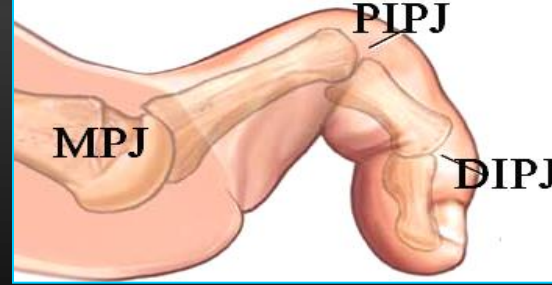


scarf osteotomy



bony & ST realignment

8/Claw toes



hyperextension at MPJ & flexion at IPJ

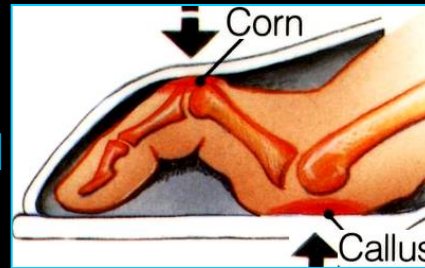
Etiology: due to **intrinsic muscles weakness**

occur in: 1-neurological disorders: **polio**, **peroneal muscle atrophy** & peripheral neuropathy
2-RA; 3-**idiopathic** as claw toes alone or with pes cavus

CF:

pain under metatarsal heads

O/E: early is **mobile**, but later: **fixed**
corns over IPJ & under met **heads**

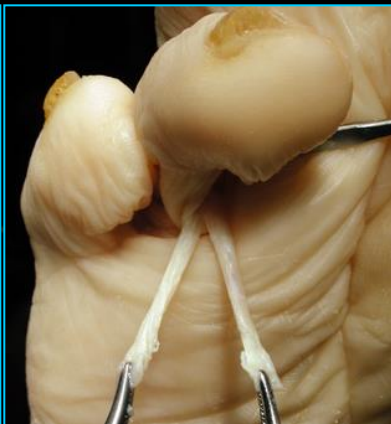
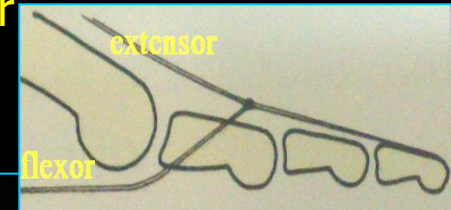


R: if **flexible** → **Conservative:** wearing **wide** shoe with **insole** like metatarsal pad or **bar**

Operative: **extensor** tendons **elongation** or flexor to extensor **transfer**

fixed → Conservative by **shoe** modification

Operative by: 1- IPJ **arthrodesis**; 2- MPJ **excision** arthroplasty

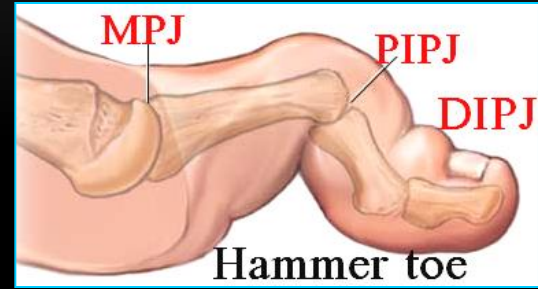


9/ Hammer toe



is fixed flexion of PIPJ with hyperextension of MPJ & DIPJ

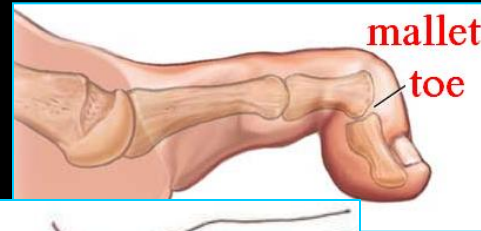
Cause: The toe is too long or the shoe is too short



R: correction & arthrodesis of PIPJ

10/ Mallet toe

flexion of DIPJ

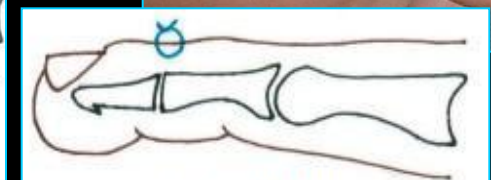
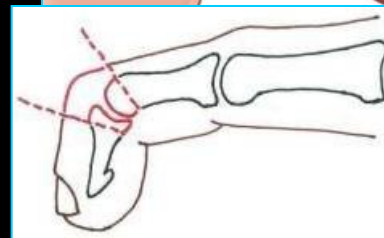


R: fusion of DIPJ in a straight position

11/Painful heel:

Sever's disease (traction apophysitis)

10yr boy with pain & tenderness over tendo Achillis insertion



X-ray: ↑ density

R: shoe with heel raise



12/Calcaneal bump (Haglund's deformity)

young woman with painful bump on back of heel

R: wearing open-back shoe;
if severe → excision of calcaneal knob



13/Calcaneal bursitis

due to friction between Achilles tendon & the skin or calcaneum X-ray: bony spur

R: open-back shoe or steroid injection.



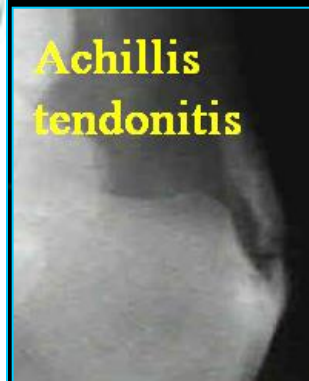
14/Achilles tendonitis (para- or peri-tendonitis)

overuse (athletes) may cause inflammation of the paratenon → swelling & pain

R: ice-packs, rest & steroid injection

chronic cases → surgical excision of paratenon or the spur

Tendonosis: is degeneration of Achilles tendon which may end with rupture



14/Plantar fasciitis

male 30-60 yr with inferior heel pain typically with the 1st step out of bed or after a period of rest

O/E: localized tenderness under the heel

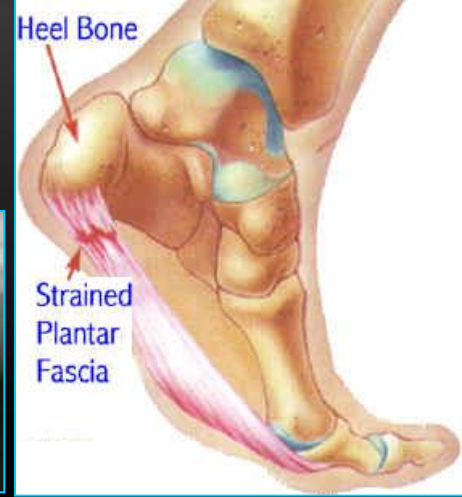
Cause: overuse (traction) will cause micro tears & inflammatory reaction

*It may be associated with Reiter's syndrome
gout or ankylosing spondylitis

X-ray: shows bony spur in 50%

R: NSAID, heel pad, local steroid injection

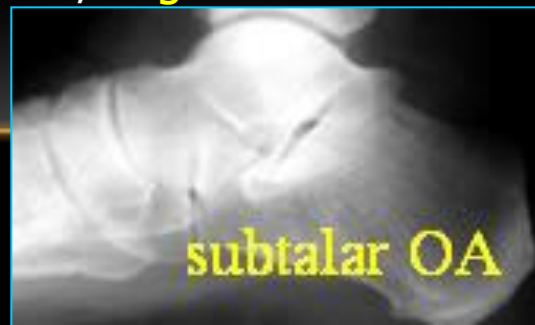
If resistant → surgical division of plantar fascia ± excision of the spur



Calcaneal bone lesions & subtalar joint arthritis

can present as heel pain like stress fracture, osteomyelitis, osteoid osteoma, bone cyst, giant-cell tumor, Paget's disease

Subtalar arthritis like OA, RA, pyogenic or TB arthritis



Painful mid-foot

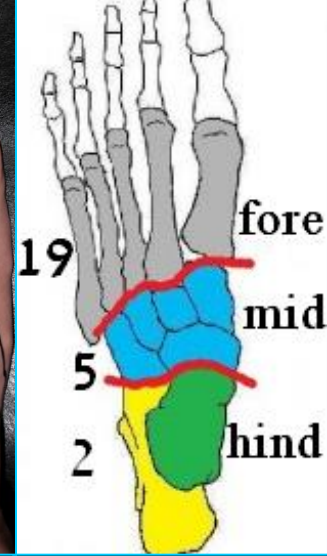
Köhler's disease (navicular osteochondritis) child <5yr

CF: limp, pain & tender swelling over the navicular bone

X-ray: dense & fragmented navicular

R: it is self-limiting;

if pain is severe → below-knee cast



Freiberg's disease

Osteochondritis (avascular necrosis) of the 2nd MT head

X-ray: dense flat eroded head, thick neck, ↑ joint space

R: rest, cast, modified shoe

if pain persists → surgical excision



Stress fracture of the 2nd or 3rd metatarsal

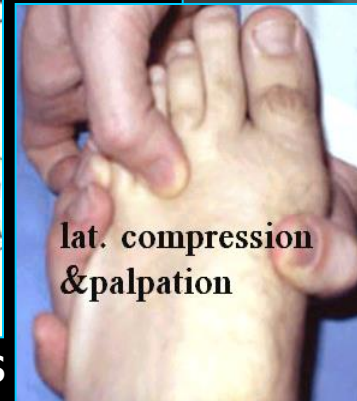
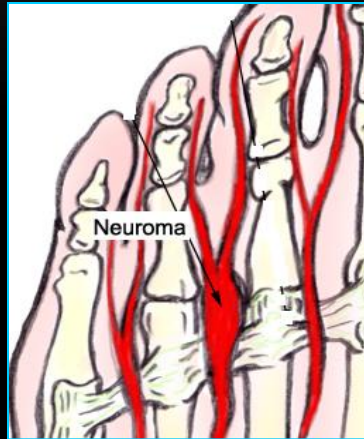


Stress fracture

young adults after **unaccustomed** activity with **tender swelling**
X-ray: early is **normal**; 2 wks later: fusiform **callus** around a fine transverse # line **R:** rest

Morton's neuroma

compression of interdigital nerve
CF: 50yr woman with **pain** & **parasthesia** localized to 3rd interspace
O/E: tenderness in 3rd interMT space; **sensation** may be ↓; forefoot **compression** → symptoms
R: wide **shoe** with **padding**, local **steroid**; if fails → lig. **release** or even **excision**



Tarsal tunnel syndrome

compression of **tibial n.** as it passes under **flexor retinaculum** → pain & parasthesia

O/E: **Tinel** sign; **dorsiflexion** & **ever**sion → pain & tingling

R: surgical **decompression**

